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J. Helminthol. Soc. Wash.  
57(1), 1990, pp. 75–77

### Research Note

## Occurrence of *Skrjabinoptera leiocephalorum* (Spirurida: Physalopteridae) in *Leiocephalus* spp. (Sauria: Iguanidae) from Hispaniola

ROBERT POWELL,<sup>1</sup> PATRICIA J. HALL,<sup>2</sup> AND JOHN H. GREVE<sup>3</sup>

<sup>1</sup> Department of Natural Sciences, Avila College, Kansas City, Missouri 64145,

<sup>2</sup> Pharmacia Deltech Inc., St. Paul, Minnesota 55112, and

<sup>3</sup> Department of Veterinary Pathology, Iowa State University, Ames, Iowa 50011

**ABSTRACT:** *Skrjabinoptera leiocephalorum* were found free and attached in stomach lumina of *Leiocephalus schreibersi* and *L. barahonensis* from Hispaniola (Dominican Republic). Prevalence was 0.40 and 0.56 and intensities ranged from 1 to 250 and 1 to 45 in the 2 host species, respectively. There was no obvious relationship between prey selection and the presence of parasites. There was a positive correlation between larger size of hosts and prevalence, but none between size and intensities. Both males and females were infected, and reproductive condition was insignificant. Habitat was not related to the presence of parasites.

**KEY WORDS:** parasite, physalopterid nematode, *Skrjabinoptera leiocephalorum*, lizard hosts, *Leiocephalus schreibersi*, *Leiocephalus barahonensis*, Hispaniola, Dominican Republic.

*Skrjabinoptera* spp. occur in a number of reptilian hosts (Baker, 1987). Here we describe the occurrence of *Skrjabinoptera leiocephalorum* Greve and Powell, 1989, in 2 hosts from Hispaniola. Stomachs of 60 *Leiocephalus schreibersi* Gravenhorst, 1837, and 54 *Leiocephalus barahonensis* Schmidt, 1921, were examined for the presence of nematodes. Both host species are en-

demic to Hispaniola (Schwartz and Henderson, 1988).

*Leiocephalus schreibersi* were sampled from 6 and *L. barahonensis* from 5 localities in the Dominican Republic (Fig. 1). The 2 species are sympatric in Barahona (site 4). Localities, dates of collection, numbers sampled, and infected are summarized in Tables 1 and 2. Terminology follows Margolis et al. (1982). All collection sites were in acacia or agave scrub, except site 7, which was a coastal coconut palm stand near the mouth of a small stream. Sites 1, 5, 6, and 7 were near permanent water, and site 4 provided access to water via numerous leaks in the public water system. Sites 2, 3, 8, 9, and 10 were arid with no apparent access to surface water. Specimens were collected during the day, kept on ice until evening, killed, and preserved in formalin. After return from the field, animals were transferred to 75% ethanol, stomachs were excised, and contents analyzed. Lizards were deposited in the Bobby Witcher Memorial Collection at Avila College, Kansas City, Missouri (*L. schreibersi*:

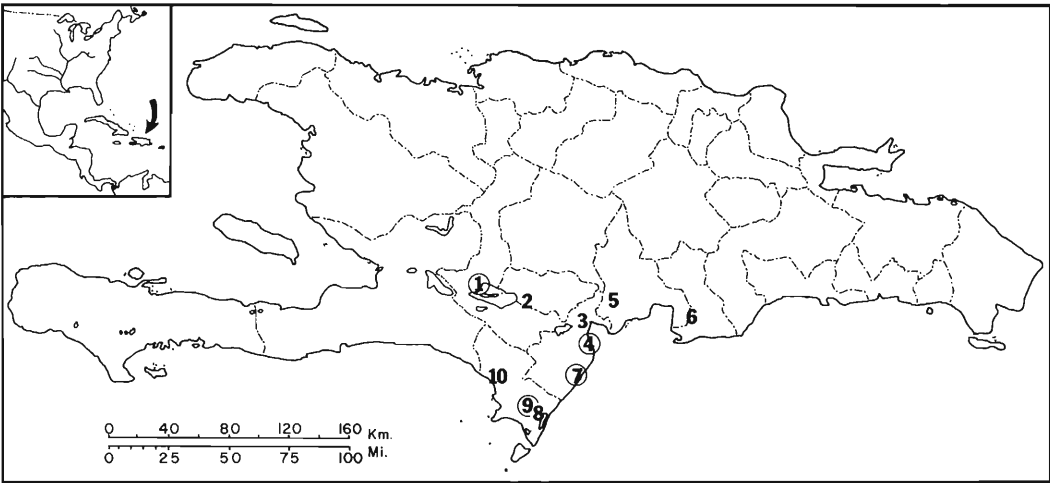


Figure 1. Hispaniola; sites from which *Leiocephalus schreibersi* and *Leiocephalus barahonensis* were collected. See Tables 1 and 2 for specific localities. Circled numbers represent sites from which animals infected with *Skrjabinoptera leiocephalorum* were taken.

BWMC 03010–03030, 03177–03201, 03289–03302; *L. barahonensis*: BWMC 03002–03009, 03202–03235, 03378–03389).

Adult and juvenile parasites of both sexes were found in the stomachs of hosts. Most were free in the lumen, admixed with ingesta, although individuals in 2 hosts from site 1 were attached to the stomach wall. Free (especially smaller)

nematodes in *L. barahonensis* were concentrated in the pylorus.

There was no obvious relationship between prey selection and the presence of nematodes. Sixteen arthropod orders were identified among the ingesta. No orders were represented exclusively in infected populations. There was a positive correlation between larger size and prevalence, but none between size and intensities ( $P < 0.05$ ) (Sokal and Rohlf, 1987). Snout–vent lengths ranged from 31 to 87 mm ( $\bar{x} = 60.2$ ) in

Table 1. *Skrjabinoptera leiocephalorum* in *Leiocephalus schreibersi* from the Dominican Republic.

Site*	Date	N	Prev- alence	Inten- sity	Mean	Me- dian
1	Mar 86	10	0.90	2–250	39	12
	Aug 87	11	0.36	2–9	4	2
2	Mar 86	3	0			
	Aug 87	2	0			
3	Mar 88	2	0			
4	Mar 86	1	0			
	Aug 87	6	0.50	7–22	14	13
	Mar 88	8	1.00	1–51	18	17
5	Aug 87	5	0			
	Mar 88	4	0			
6	Mar 86	7	0			
	Aug 87	1	0			
Total		60	0.40	1–250	23	10

\* Collection sites (elevations to the nearest 10 m): 1, Provincia de Independencia, Boca de Cachon, elev. –20 m; 2, Provincia de Independencia, 10 km S Neiba, elev. –20 m; 3, Provincia de Barahona, 26 km N Barahona, elev. 200 m; 4, Provincia de Barahona, Barahona, elev. 0 m; 5, Provincia de Azua, Río Tábara at Hwy. 44, elev. 130 m; 6, Provincia de Peravia, Río Ocoa at Hwy. 2, elev. 170 m.

Table 2. *Skrjabinoptera leiocephalorum* in *Leiocephalus barahonensis* from the Dominican Republic.

Site*	Date	N	Prev- alence	Inten- sity	Mean	Me- dian
4	Mar 86	1	0			
	Mar 88	1	1.00	29	—	—
7	Aug 87	26	0.73	1–45	10	7
	Mar 88	11	0.73	1–44	14	2
8	Mar 86	3	0			
	Aug 87	4	0			
9	Mar 86	3	0			
	Aug 87	4	0.50	10–14	12	—
10	Mar 86	1	0			
Total		54	0.56	1–45	12	7

\* Collection sites (elevations to the nearest 10 m): 4, Provincia de Barahona, Barahona, elev. 0 m; 7, Provincia de Barahona, Paraíso, elev. 0 m; 8, Provincia de Pedernales, 5 km NW Oviedo, elev. 40 m; 9, Provincia de Pedernales, 16.4 km NW Oviedo, elev. 50 m; 10, Provincia de Pedernales, 10 km N Cabo Rojo, elev. 20 m.

*L. schreibersi* and from 26 to 72 mm ( $\bar{x}$  = 49.6) in *L. barahonensis*. Both males and females were infected, and reproductive condition was insignificant (Williams' corrected *G*-test,  $P < 0.05$ ). Juveniles of both sexes, reproductively active males, and females with unyolked and yolked ovarian follicles, oviducal eggs, and corpora lutea were infected. Habitat (i.e., access to water) did not appear important (Williams' corrected *G*-test,  $P < 0.05$ ).

Stomachs of *Leiocephalus semilineatus* Dunn, 1920 ( $N = 35$ ), and lizards in the genera *Anolis* ( $N = 146$ ) (Iguanidae), *Ameiva* ( $N = 46$ ) (Teiidae), *Hemidactylus* ( $N = 26$ ) (Gekkonidae), and *Celestus* ( $N = 9$ ) (Anguidae), taken from the same localities as infected specimens, were also examined. No physalopterid nematodes were found. Voucher specimens of *S. leiocephalorum* were deposited in the USNM Helminthological Collection (80581–80584) and the parasitological collection at Avila College, Kansas City, Missouri, U.S.A. (no numbers assigned).

We wish to thank Donald D. Smith, John S. Parmerlee, Jr., Scott A. Maxey, Mark A. Rice, S. Scott Duer, Sascha Oerter, and members of the Avila Field Biology classes of 1986 and 1988 for their assistance in the field and laboratory.

J. Helminthol. Soc. Wash.  
57(1), 1990, pp. 77–78

### Research Note

## Reduction of the *Syphacia* sp. Infection in the Laboratory Rat by Viprostol Treatment

MICHAEL R. IRWIN, REYNALDO J. ARCEO, AND THOMAS DAVIS

Experimental Pathology Department, Medical Research Division, American Cyanamid Company, Pearl River, New York 10965

**ABSTRACT:** During the conduct of routine chronic pre-clinical safety evaluation studies it was found that orally administered viprostol, a prostaglandin  $E_2$  analogue, reduced or removed the *Syphacia* sp. infection in laboratory rats. This apparent anti-nematodal activity tended to correlate with the presence of gastrointestinal trophic changes, suggesting that the activity may be due to an altered environment of the parasite.

**KEY WORDS:** *Syphacia* sp., laboratory rat, prostaglandin  $E_2$ , viprostol.

We report an interesting observation of apparent anti-pinworm (*Syphacia* sp.) activity of a

Sixto and Ivonne Incháustequi provided assistance in the Dominican Republic. José A. Ottenwalder of the Parque Zoológico Nacional facilitated opportunities for field work. Permits were graciously provided by Emilio A. Bautista M., Director, Departamento Vida Silvestre, República Dominicana.

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prostaglandin  $E_2$  (PGE $_2$ ) analogue, viprostol, which was observed in 2 chronic preclinical toxicology studies conducted in rats (COBS CD.®, Charles River Breeding Laboratories Inc.). In the studies, groups of rats, unrestricted but individually housed, were treated with 0, 0.5, 2, or 10 mg/kg/day given orally in one study and applied topically in petrolatum in the other for 1 yr, followed by 1, 2, or 3 mo of posttreatment observation. Surviving rats were killed at the end of each period. A single stained tissue section of the colon of all rats was examined microscopically